

APPENDIX A

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Claims 1-21 (Canceled)

22. A method of treating, managing or preventing obstructive lung disease comprising administering to a patient a pharmaceutical composition comprising an effective amount of a medicament selected from the group consisting of:

- (a) heat killed whole cell *Mycobacterium w*,
- (b) sonicated *Mycobacterium w*,
- (c) a solvent extract of *Mycobacterium w*, wherein the solvent is selected from the group consisting of chloroform, ethanol, methanol, and acetone,
- (d) an enzymatic extraction of *Mycobacterium w*, wherein the enzyme is liticase, and
- (e) admixtures thereof.

23. The method of claim 22 or 48, wherein the method is for treating, managing or preventing asthma.

24. The method of claim 23, wherein the method is for delaying attacks of asthma.

25. The method of claim 23, wherein the method is for reducing the requirement of drugs used to improve lung function during the management of asthma.

26. The method of claim 23, wherein the method is for improving lung function in the presence or absence of other drugs.

27. The method of claim 23, wherein the asthma is bronchial asthma.

28. The method of claim 22, wherein the pharmaceutical composition comprises an admixture of heat killed whole cell *Mycobacterium w* and sonicated *Mycobacterium w*.

29. The method of claim 22, wherein the pharmaceutical composition comprises sonicated *Mycobacterium w*.

30. (Canceled)

31. (Canceled)

32. The method of claim 22, wherein the pharmaceutical composition comprises a solvent extract of *Mycobacterium w* wherein the solvent is selected from the group consisting of chloroform, ethanol, methanol and acetone.

33-35. (Canceled)

36. The method of claim 22 or 48, wherein the pharmaceutical composition further comprises an adjuvant.

37. The method of claim 36, wherein the adjuvant is selected from the group consisting of mineral oil, mineral oil and surfactant, Ribi adjuvant, Titer-max, syntax adjuvant formulation, aluminum salt adjuvant, nitrocellulose adsorbed antigen, immune stimulating complexes, Gebru adjuvant, super carrier, elvax 40w, L-tyrosine, monatanide (manide-oleate compound), Adju prime, Squalene, Sodium phthalyl lipopoly saccharide, calcium phosphate, saponin, melonoma antigen and muramyl dipeptide (MDP).

38. The method of claim 22 or 48, wherein the pharmaceutical composition further comprises a surfactant.

39. The method of claim 38, wherein the surfactant is polyoxyethylene sorbitan monooleate (Tween 80) or Titon X100.

40. The method of claim 38, wherein the surfactant is present in the pharmaceutical composition in a concentration of up to 0.4%.

41. The method of claim 38, wherein the surfactant is present in the pharmaceutical composition in a concentration of up to 0.1%.

42. The method of claim 22 or 48, wherein the pharmaceutical composition further comprises a preservative.

43. The method of claim 42, wherein the preservative is Thiomerosal and is present in a concentration of 0.01% w/v.

44. (Canceled)

45. The method of claim 22, wherein the pharmaceutical composition is in a unit dosage form comprising at least 10^5 *Mycobacterium w* as:

- (a) 10^5 heat killed whole cell *Mycobacterium w*
- (b) 10^5 sonicated *Mycobacterium w*,
- (c) a solvent extract of 10^5 *Mycobacterium w* wherein the solvent is selected from chloroform, ethanol, methanol and acetone, or
- (d) an enzymatic extraction of 10^5 *Mycobacterium w* wherein the enzyme is liticase.

46. The method of claim 22, wherein the pharmaceutical composition is in a unit dosage form comprising at least 10^7 *Mycobacterium w* as:

- (a) 10^7 heat killed whole cell *Mycobacterium w*,
- (b) 10^7 sonicated *Mycobacterium w*,
- (c) a solvent extract of 10^7 *Mycobacterium w*, wherein the solvent is selected from the group consisting of chloroform, ethanol, methanol, and acetone, or
- (d) an enzymatic extraction of 10^7 *Mycobacterium w* wherein the enzyme is liticase.

47. The method of claim 22, wherein the pharmaceutical composition is in a unit dosage form comprising between 10^8 and 10^9 *Mycobacterium w* as:

- (a) between 10^8 and 10^9 heat killed whole *Mycobacterium w*,

- (b) between 10^8 and 10^9 sonicated *Mycobacterium w*,
- (c) a solvent extract of between 10^8 and 10^9 *Mycobacterium w* wherein the solvent is selected from the group consisting of chloroform, ethanol, methanol and, acetone, or
- (d) an enzymatic extraction of between 10^8 and 10^9 *Mycobacterium w* wherein the enzyme is liticase.

48. A method of treating, managing or preventing obstructive lung disease comprising administering to a patient a pharmaceutical composition comprising an effective amount of heat killed whole cell *Mycobacterium w*.

49-54. (Canceled)